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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,996	04/20/2005	Yongren Benjamin Peng	58768.000007	8890

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HUNTON & WILLIAMS LLP
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EXAMINER

PERREIRA, MELISSA JEAN

ART UNIT	PAPER NUMBER
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1618

MAIL DATE	DELIVERY MODE
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10/20/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<p align="center">Advisory Action Before the Filing of an Appeal Brief</p>	<p>Application No. 10/531,996</p>	<p>Applicant(s) PENG ET AL.</p>	
	<p>Examiner MELISSA PERREIRA</p>	<p>Art Unit 1618</p>	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 15 October 2010 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: _____.
- Claim(s) objected to: _____.
- Claim(s) rejected: 1-20,36 and 37.
- Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see below.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/Michael G. Hartley/
Supervisory Patent Examiner, Art Unit 1618

/Melissa Perreira/
Examiner, Art Unit 1618

Claims 1-5,8,10-16,18-20,36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glajch et al. (US 6,455,024 B1) in view of Brow et al. (J. Non-Crystalline Solids 1990, 120, 172-177) and Yashchishin et al. (Glass and Ceramics 1997, 54, 6-8) and in further view of Day et al. (US 5,011,797).

Claims 1-5,8-11,13-16,18-20,36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glajch et al. (US 6,455,024 B1) in view of Brow et al. (J. Non-Crystalline Solids 1990, 120, 172-177) and Yashchishin et al. (Glass and Ceramics 1997, 54, 6-8) and in further view of Gilchrist et al. (US 6,143,318).

Claims 1-8,10-20,36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glajch et al. (US 6,455,024 B1) in view of Brow et al. (J. Non-Crystalline Solids 1990, 120, 172-177) and Yashchishin et al. (Glass and Ceramics 1997, 54, 6-8) and in further view of Wong et al. (US2004/0131543A1).

Applicant asserts that Glajch's nitriding method is based on a method disclosed by Reidmeyer et al. (J. Non-Crystalline Solids 1986, 85:186-203, hereinafter "Reidmeyer"). Reidmeyer teaches that the dissolution rate of glass treated with 11.75 % nitrogen (i.e., Reidmeyer/Glajch nitriding method) is 1000 times slower than the dissolution rate of base glass (i.e., glass not treated with nitrogen). Yashchishin and Brow suggest that the dissolution rate of their treated glass is only about 3 to 6 times and 10 times, respectively, slower than the dissolution rate of base glass. As such, one of skill in the art would understand that glass treated using Yashchishin's or Brow's method would dissolve significantly faster than glass made using Glajch's method. Accordingly, there is no reason why one of skill in the art would substitute Glajch's nitriding method, which seeks to decrease the dissolution rate, with a nitriding method that results in a faster dissolution rate than that of Glajch.

Brow teaches of the advantages provided by a nitrogen surface layer on the phosphate glass, such as increased aqueous durability, increased chemical durability, etc. wherein the dissolution rates are shown in fig 4 wherein the dissolution rates for the nitrogen surface phosphate glasses approach 6×10^{-8} g/cm²min and are up to 20 times better than the base glass (figure 4; p175, left column, first full paragraph).

Yashchishin teaches the advantages of improved chemical stability by 3 to 6 times, microhardness and thermal stability are increased by a factor of 1.5 as well as water repellency of the glass surface.

Therefore, it would have been obvious and predictable to one ordinarily skilled in the art to provide a nitrogen surface on the phosphate glass of Glajch to provide for the numerous advantages of increased aqueous durability, increased chemical durability, microhardness, etc.

Applicant asserts that Brow's and Yashchisin's nitriding methods are specific for bulk glasses, whereas Reidmeyer's nitriding methods are undesirable for bulk glasses.

The references of Brow and Yashchishin disclose methods of nitriding phosphate glasses. At the time of the invention it would have been obvious to one ordinarily skilled in the art that the method of nitriding the phosphate glasses can be applied to particles of smaller sizes, such as particles, powders as nothing in the references exclude nitriding particles, powders of smaller sizes and the methods of Brow and Yashchishin do not deformed in phosphate glass the process and thus the sizes are not altered.

Applicant asserts that the claimed implant materials comprise a nitrogen-rich surface layer that assists in, for example, preventing the premature start of bioresorption and the premature release of radioisotopes.

The nitrogen layer on the surface of the phosphate glass of the combined references of Glajch et al., Brow et al. and/or Yashchishin et al. to improve its chemical stability (by 3 to 6 times), mechanical strength, etc. without changing its chemical composition encompasses the nitrogen rich surface layer of the instant claims and is capable of the same functions and has the same properties, such as substantially preventing premature release of said radioactive isotope or combination of radioisotopes for up to 10 half-lives of the longest lived radioisotope in said implant.

Applicant asserts that the combination of references does not teach or suggest a phosphate based glass matrix comprising a calcium to phosphate ratio from about 0.33 to about 1.67.

The calcium phosphate glass particles/implants of Glajch et al. encompasses the calcium phosphate resorbable implant of the disclosure and thus are capable of the same functions and have the same properties, such as calcium to phosphate ratio from about 0.33 to about 1.67.

Applicant asserts that the combination of references does not teach or suggest a resorbable implant materials comprising a phosphate based matrix wherein at least a part of the phosphate based matrix contains a borate or silicate.

Glajch et al. teaches a particle/implant which is in a glass state and is comprised of silicas, phosphates, etc.